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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
10/070,342	02/28/2002	Michael Douglas Spears	SPER-100A	2921
28304	7590	10/05/2004	EXAMINER	
JEAN M. MACHELEDT 501 SKYSAIL LANE SUITE B100 FORT COLLINS, CO 80525-3133			ROANE, AARON F	
			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/070,342

Applicant(s)

SPEARS, MICHAEL DOUGLAS

Examiner

Aaron Roane

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-23, 27-30 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers (USPN 5,807,392) in view of Esty et al. (USPN 4,032,738).

Regarding claims 21, 22 and 28, Eggers discloses a resistive heat cutting and coagulating surgical instrument comprising a radio frequency source (14) electrically connected to an impedance matching circuit (149) comprising a tuning element in the form of a capacitor (162) and an inductive element in the form of a transformer (150), wherein the inductive element is electrically connected to a conductive cutting tip (24) via a switch contact area located on or encased in the device handle /housing (22) (see reference to a switch on the handle 22 in col. 7, lines 18-30), it should be noted that inherently electrical current flows through the housing, the impedance matching circuit and the switch contact area, see col. 6, line 49 through col. 7, line 67 and col. 12, line 25 through col. 13, line 62 and figures 1-

4. The step of treating soft-tissue is disclosed in the abstract and col. 1-6 where Eggers discusses the cutting and hemostasis of tissue (interpreted as including soft-tissue by the examiner). Eggers fails to disclose a switch-contact area of a switch comprising non-conductive protuberance extending through an aperture in a casing for said switch and/or "directing a sufficient force against a non-conductive switch-protuberance having at least one surface in contact with a spring-engaged conductive pathway within a switch casing, such that said conductive pathway makes contact with said switch-contact area." Eggers does not disclose the specific structure of the switch contact area, but does specify that the switch contact area is provided on the housing/handle. Finally, Eggers does not disclose that the conductive-pathway comprises an elongated member; and a stay is incorporated with an inner wall of said switch casing that supports said elongated member until said sufficient force is directed against said protuberance allowing said electric current to flow to said tip. Nor does Eggers disclose said stay comprises a first and second projection against which said elongated member abuts, said projections being affixed to said Inner wall in proximity to said switch- contact area; a second end portion of said tip is releasably interconnected to a distal end of said probe housing such that, upon said interconnection, said tip is In electrical communication with said switch-contact area or wherein said surface of said protuberance less that of a foot in contact with said spring-engaged conductive-pathway: said conductive-pathway comprises a thin plate member and said switch-contact area comprises a first and second sub-area each atop, respectively, a first and second ledge secured to said switch casing; and said switch further comprises a spring assembly Interposed between said plate member and an inner

surface of said. Esty et al. disclose an electrosurgical instrument and teach the provision of placing a printed circuit board (31) within the hand-held housing (10) of the instrument in order to provide low cost elements and techniques as well as a more compact arrangement, see col. 5, lines 29-62. Esty et al. also teach the use of providing the hand-held housing with an electrical switch (11 and 12 or 54 and 55) in order to provide convenient manual use by the surgeon, see abstract and col. 2, lines 16-60. The electrical switch disclosed by Esty et al. comprises a non-conductive switch-protuberance (22 and 29) extending through an aperture in a casing and having at least one surface in contact with a spring-engaged conductive pathway (30) within a switch casing (36), such that said conductive pathway makes contact with said switch-contact area ("the upwardly arcuate configuration of these flexible devices permits downward movement of plunger 29 so as to momentarily deform deflectable metal dome 30 thus completing a switch function in association with electrical contact points on circuit board 31," see col. 4, lines 33-38). Providing sufficient force to the switch-protuberance such that said conductive-pathway makes contact with said switch-contact area is inherent and is the very nature of operation of electrical switches with spring-engaged conductive pathways. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Eggers, as taught by Esty et al., to a non-conductive switch-protuberance having at least one surface in contact with a spring-engaged conductive pathway within a switch casing, such that said conductive pathway makes contact with said switch-contact area. Finally, at the time of the invention, it would have been an obvious matter of design choice to one of ordinary skill in the art to use the switch

disclosed by Esty et al. because Applicant has not disclosed that the detailed switch configuration claimed provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with switch structural configuration detailed by Esty et al. because it provides controllable energy activation. Furthermore, pending a statement of criticality the claimed invention regarding the structural details of the switch are considered to be an obvious design choice over Eggers in view of Esty et al. and not patentably distinct thereover.

Regarding claims 23 and 30, Eggers further discloses a releasably connectable cable-release assembly comprising a cable (16) having a connectors (48, 50, 52 and 54). One end of the cable (16) is connected to the treatment device by connectors (52 and 54), while the other end is attached to the generator (14) by connectors (48 and 50). The cable release assembly is comprised of the connectors (52 and 54) at the distal end of the cable (16) and opposing engaging connectors (125 and 126) located in the proximal end of the handle or handle portion (22), see col. 7 and 8, col. 12, lines 25-41 and col. 13, lines 10-26 and figures 1, 3 and 4. The steps engaging a cable to the cable-release assembly or mechanism to connect the RF source is inherent to the cable/cable release assembly or mechanism disclosed.

Regarding claims 27, 29 and 34, Eggers in view of Esty et al. disclose the claimed invention. Esty et al. teach the use of providing the housing with a "replaceable chuck"

(15) such that a wide variety of tips can be used with one instrument, see col. 2, lines 16-42 and figure 1.

Claims 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers (USPN 5,807,392) in view of Esty et al. (USPN 4,032,738) as applied to claims 21 and 28 above, and further in view of Yamanashi et al. (USPN 6,059,781).

Regarding claims 24 and 31, Eggers in view of Esty et al. disclose the claimed invention except for explicitly reciting that the housing has an electrically insulative layer.

Yamanashi et al disclose a RF generator source (44) connected to an impedance matching circuit (52) comprising an inductive element ("tuning coil" 30) and a conductive cutting tip (24, 26, 38, 40 and/or 43), see col. 4, lines 6-65 and figures 1-7. Yamanashi et al. also disclose that the instrument is used to surgically treat tissue through contact, see abstract. Yamanashi et al. disclose a transformer (30) and teach providing an electrically insulated housing in order to prevent electrical shock, see col. 4, lines 29-33 and figures 5 and 7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Eggers in view of Esty et al., as taught by Yamanashi et al., to provide an electrosurgical instrument/device with a handle/housing with an electrically insulating layer in order to prevent electrical shock to the operator or other unintended electrical conductor.

Claims 25, 26, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers (USPN 5,807,392) in view of Esty et al. (USPN 4,032,738) and further in view of Yamanashi

et al. (USPN 6,059,781) as applied to claims 24 and 31 above, and further in view of Rydell (USPN 5,810,809).

Regarding claims 25 and 32, Eggers in view of Esty et al. and in further view of Yamanashi et al. disclose the claimed invention except for explicitly disclosing a metal handle/housing having an insulative layer and that the tip is releasably engagable. It is well known in the art to provide a wide variety of handles that provide a rigid protective casing/housing for electrical components in the form of a hollow metal handle and to further layer the hollow metal handle with an insulative layer to prevent electrical shock. Rydell discloses an electrosurgical instrument and teaches that it is known in the art to provide a "hollow metal handle" in order to contain various electrical/mechanical components, see col. 1, lines 13-43. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Eggers in view of Esty et al. and in further view of Yamanashi et al., as taught by Rydell, to provide a the device with a "hollow metal handle" in order to contain various electrical/mechanical components.

Regarding claims 26 and 33, Eggers in view of Esty et al. and in further view of Yamanashi et al. and still in further view of Rydell. It is extremely well known in the art to provide electrosurgical instruments with electrical insulation on the handle in order to prevent electrical shock to the operator. Furthermore, the examiner interprets insulative layer as inherently comprising a polymer/dielectric material.



***Response to Amendment***

The examiner acknowledges the amendments to the claims and has provided a new grounds for rejection. Specifically, the detailed structure of the switch and switch contact area are design choices and are not critical to the function of the device. The previous office actions either allowed or objected to some claims that recited detailed structure of the switch and/or switch contact area. Upon further review this subject matter has been rejected through a design choice obviousness type rejection. Accordingly, this office action is non-final.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Roane whose telephone number is (703) 305-7377. The examiner can normally be reached on 9am - 5pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (703) 308-0994. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.R. *A.R.*  
October 4, 2004

*Roy D. Gibson*  
**ROY D. GIBSON**  
**PRIMARY EXAMINER**